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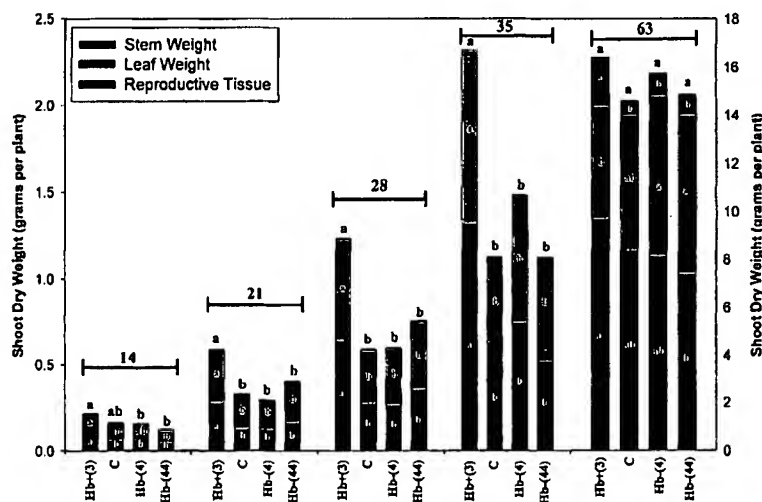
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**(54) Title:** METHOD OF MODIFYING PLANT PHENOTYPES WITH NONSYMBIOTIC HEMOGLOBIN



**(57) Abstract:** The present invention provides a method of modifying a plant phenotype by transforming a plant to alter the level of expression of non-symbiotic plant hemoglobin in the plant, whereby the transformed plant exhibits, under normal oxygen conditions, a plant phenotype that is modified as compared to a non-transformed plant. Plants exhibiting modified phenotypes under normal oxygen conditions also are provided. Methods of modifying the response to a plant hormone in a plant also are provided.